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Scheme for the Control of Diseases of Dairy Cattle*

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What is this scheme? It is an attempt to control certain diseases which are causing this country serious losses and which result in the nation's milk supply being considerably smaller than it might be—and any scheme, whatever its shortcomings, which will aid this attempt is worthy of support, especially in war-time.

One of the features of the scheme is the predetermined cost to the owner of the veterinary surgeon's services. There is no uncertainty as to what the farmer must pay for veterinary assistance in his attempt to control these diseases, an uncertainty which might well discourage many farmers, and with such an arrangement it is necessary to define with some precision what is covered by this inclusive fee. As for the fee itself, it is not for me to discuss the agreement reached between the N.F.U. and the N.V.M.A. but I think it is fair to say that probably neither side fully realised what was involved in the undertaking and I think it will be agreed that if both parties co-operate in the control measures, the owner will have received full value for his money and while the veterinary surgeon in some cases will probably receive less than if each visit and bit of work had been charged for at ordinary rates, the profession as a whole will have increased its income materially and the country will have benefited in proportion to the success of their efforts.

There has been a certain amount of misunderstanding as to the objects of the scheme. I do not know where or how that arose but there is a feeling that farmers have been led to expect too much from the scheme. Nothing spectacular has been promised by any responsible person that I have heard of and no one would suggest that the lines of treatment in C.S.1 are going to stamp out mastitis, for example, nor that every animal vaccinated against contagious abortion is going to produce a living full-term calf, nor that every individual cow or heifer can be got to breed. Let there be no misunderstanding on these points. All that any person can promise is that by the use of these methods, which are at the moment those which research and experience have shown to be of such value as to warrant their general adoption, a worth-while improvement can be brought about, an improvement which will vary in accordance with the disease being dealt with, the skill of the individual veterinary surgeon and the co-operation of the owner.

To my mind the greatest benefit is likely to be seen in the control of infertility, if for no other reason than that less has hitherto been done in this field than in others.

With improved vaccines better results can be confidently looked for in the control of brucellosis but with mastitis the position is frankly much more difficult. We still have much to learn about this disease and how it can best be controlled, but that is no reason why we should not use the best weapons available and I cannot understand why it should be suggested that the whole scheme should not have been launched until fully effective means of dealing with mastitis had been found. The scheme provides for the inclusion in the recommended treatments of any new development which has proved its worth. Research is going on and much is being learned. This is neither the time nor place to discuss the work that is going on but I can assure you of this: we shall only be too glad to recommend any new treatment, whatever it may be, which will produce better results than those presently recommended but we would be failing in our duty if we did not take such action as is now possible to control the disease.

Now to refer briefly to the part the Ministry plays in this scheme. The vaccines against abortion are supplied free and you have the choice of two. No. 1 produces agglutinins which persist for some time and, generally speaking, the older the animal at the time of vaccination, the longer will the agglutinins persist. On the other hand, No. 2 vaccine produces no agglutinins. No. 1 vaccine is given in one dose and ordinarily vaccination need not be repeated after each parturition. No. 2 vaccine is given in two doses and vaccination is repeated after each calving. If you wish you can use both vaccines in the same herd, No. 1 for calves and No. 2 for adults, so making the best of both worlds. Your adults will not react to the agglutination test nor will your vaccinated calves, with few exceptions, by the time they enter the milking herd, but few breeders are much interested in the agglutination test so that it will only be in special circumstances that No. 1 vaccine will be unsuitable because it produces reactors. On the other hand, we do not know if No. 2 vaccine is suitable for calf vaccination and it is therefore not recommended for calves.

Vaccination is only to be carried out in infected herds and infection is to be judged differently in T.T. and ordinary herds. The clinical history is sufficient evidence in ordinary herds but in T.T. herds laboratory evidence is required so that blood samples have to be submitted to the Ministry's laboratory at Lasswade before vaccination can be carried out in a T.T. herd.

It is up to the veterinary surgeon to decide how many samples he need send for the purpose of establishing evidence of infection. In England the tendency appears to have been to send more than is necessary but in dealing with a herd about which little or nothing is known, then a fair number of samples may be desirable. Apart from establishing the existence of infection you may wish to ascertain if a particular abortion has been due to brucellosis and then, of course, there is no reason why a blood sample or a foetus should not be sent up for examination.

With regard to trying to keep a herd free from infection by blood testing and removal of reactors, this cannot be recommended except in special cases in view of the risks of reintroduction of the disease and when this does occur in an unprotected herd the results are frequently very serious. One point that has cropped up in connection with clean herds has been how often routine blood sampling should be done. That will depend on circumstances and it is suggested that the veterinary surgeon discuss a plan of campaign with the laboratory in the light of the history of the herd, risks of re-introduction, etc. But before leaving vaccination there is one point I wish to mention. It must be remembered that strict asepsis must be observed in your administration if the risk of abscess formation is to be avoided. Each batch is tested before issue and abscess formation can only result from a faulty technique introducing pyogenic organisms.

With regard to milk sampling, you cannot wait until you have had a sample examined before treating acute cases of mastitis, so you must judge from the history of the herd and the clinical evidence and it is for this reason that milk sampling should be mainly confined to identifying the type of infection, after which cases showing similar symptoms may be taken as being of the same type. No routine inspection of quarter samples for the identification of infected cows can be undertaken, though a veterinary surgeon may send some samples from treated cows to ascertain whether a bacteriological cure has been effected and he will naturally wish to do so if the treatment has been experimental.

As to the supply of sulphanilamide, you can hold a reserve of up to 1 lb. for every ten cows covered by the undertaking so that there need be no delay in the treatment of suitable cases. This drug is regarded as specially suitable for acute cases of streptococcal mastitis but recently we have had reports of its successful use in sub-acute cases, even in some where the only evidence of infection was a few clots in the fore milk. The use of this expensive drug for such cases is not yet sufficiently supported by laboratory evidence to justify its general use in this way. If anyone has any evidence of this use of sulphanilamide I would be glad to have particulars.

Johne's disease is not the problem in Scotland which it is in some districts in England and some surprise has been expressed at its inclusion in the scheme in view of the meagre measures which are proposed for its control. On infected farms the simple rules of good hygiene which have been outlined, if carried out under the guidance of the veterinary surgeon, will go far to limit the losses from this disease until the day when research provides a diagnostic agent which will identify the pre-clinical case and allow the disease to be dealt with by testing and isolation of the infected animal.

Lastly, there is the complex problem of infertility. The possible benefit to be derived from a detailed and continued effort to control infertility will, to my mind, far outweigh the inclusive fees being

(*Concluded at foot of col.* 1, *page* 506)

* Address in opening a discussion on the working of the Survey Scheme, at the meeting of the Scottish Branch, N.V.M.A., held in Glasgow on October 21st, 1942.

"Cramp" in Racing Greyhounds

G. P. MALE, M.R.C.V.S.
Reading

To many veterinary surgeons now engaged on greyhound racing tracks Major Kirk's paper and the discussion that followed must have been most interesting. It would appear, however, that several conditions causing an inability to race were erroneously described by some speakers as "cramp," such as injuries due to bumping at bends, strains of muscles, unfitness, diseases of the heart and other organs, doping by morphia, etc., but true "cramp" in greyhounds, as it appears to me, should be defined as a rigidity of the muscles, especially involving the hind legs and back, which is manifested during a race.

Among the causes enumerated by Major Kirk was the administration of strychnine, and judging from my recent experiences I should like to support this; indeed, I would go further and suggest that it is one of the principal causes of greyhound "cramp." Having made a careful study of the evidence given at the meeting, I am the more convinced that this drug, given perhaps in conjunction with others, is the main exciting factor with possibly other conditions as predisposing causes.

The following are some of my reasons:—

1. The symptoms described by Major Kirk exactly correspond with those observed to occur in three greyhounds which died shortly after racing, and where on an analysis having been made of the stomach contents, strychnine, cocaine and heroin were found in each case. Other dogs recovered after large doses of antidote had been given.

2. As in Major Kirk's cases of "cramp" these greyhounds were "hot favourites" and "unbeatable"—always a suspicious circumstance.

3. They were in "tip-top condition," which I think rules out the arguments that "cramp" is due to running dogs when unfit, or that it is caused by muscle fatigue. Surely the natural function of greyhounds is to race and this they do of their own volition without whips or spurs.

4. Several observers noted that excitable dogs were more likely to be attacked. Strychnine would, of course, increase this excitability or in fact produce it.

5. Others found that those hounds kennelled for longer periods than others were more prone to "cramp." This is to be expected, for if strychnine was administered in capsules before kennelling, the longer it had been given the more would be absorbed. Some little time ago I was fortunate enough to be able to analyse some capsules which had been obtained from an individual who had been bribed to administer them to certain greyhounds, and it would appear that the exact dose has been carefully calculated to give the maximum stimulating effect at the time of racing, but sometimes owing to an overdose, or more susceptibility in some dogs, to delays in racing, or to over excitability, the drugs exercise a too powerful action, causing "cramp" or even fatal results.

6. Mr. Bateman, evidently a very careful observer, found that bromides in large doses were very effective as a preventive of "cramp." As, however, bromides are one of the antidotes to strychnine, this, of course, would account for the beneficial action.

7. Mr. J. J. Davies stated that "he had proved that dogs that had been interfered with would go down with 'cramp,'" also that on one of his tracks there had been no case for three years after all the staff had been dismissed as a result of doping.

8. If one considers the action of strychnine it will be seen that the drug causes abnormal contractions of the muscles.

Sir W. Langdon-Brown says, "In normal muscular action the contraction of one group naturally has to be accompanied by the relaxation of its opposing group; but under the influence of strychnine this relaxation is converted into contraction also, so that the whole body is thrown into rigid contraction in which the strongest group of muscles wins."

As the strongest muscles in the greyhound are those of the hind limbs and loins, this would account for the symptoms and rigidity shown in these cases of "cramp."

In my opinion the term "cramp" is a misnomer when applied to the inability to race exhibited in heart disease. In these cases the symptoms are distressed respirations, cyanosis and collapse, but the muscles are not noticeably involved. There is really very little similarity between "cramp" and azoturia. The aetiology, pathology and sequelae are quite different. Azoturia often occurs in severe weather owing to the horse, previously in hard condition, being suddenly deprived of work and exercise.

That doping occurs on greyhound tracks is unfortunately only too true and those veterinary surgeons officially employed should consider it their duty to investigate all suspected cases even if the managements do not give their support, as the public and owners look to the veterinary profession as their great safeguard against such practices. It is to be hoped that the N.G.R.C. will support their veterinary officials in their endeavours, otherwise the outlook for greyhound racing will indeed be a deplorable one. If the N.G.R.C. has not this power and vested interests are too strong, then powers must be acquired, as it is most necessary that the controlling body should be quite independent of the track and that the veterinary officials should have an assured position.

Calcification of the Intervertebral Discs in the Dog

HAMILTON KIRK, M.R.C.V.S.
London

At a meeting of the Central Veterinary Society held on October 2nd, the Secretary of that Society—Mr. J. W. Holmes—presented a radiograph of the spinal column of a Pekingese spaniel showing calcification of an intervertebral disc in the cervical region. The clinical characteristics of the condition, as described by him in your last issue, were rather sudden onset, general hyperaesthesia about the body (so that the dog resented manipulation) and also marked torticollis.

Dr. Hare said that the condition greatly interested him. It happened to be something new in canine pathology, and he suggested that the Society should be given more facts.

In the course of the discussion I remarked that during the year I had been asked by practitioners and owners to radiograph a number of dogs to ascertain the cause of paraplegia manifested by them, and that in four of the cases (all Pekingese) I had observed abnormal intervertebral bodies, presumed to be calcified discs, situated in various regions of the spinal column.

In previous years I had observed similar phenomena, always in Pekes, and wrote my first account of such a case in 1937, which eventually was published in my "Index of Diagnosis" in 1939. In that volume, on page 337, appears a radiographic illustration showing these discs in the third and fourth and the fourth and fifth intervertebral spaces. (Fig. 1.)

This was a 3-year-old Peke which—six months earlier—had a short bout of screaming obviously due to pain. At the termination of the attack the dog looked frightened and seemed definitely afraid to move. During the next five months, to touch the dog about the neck or chest would occasionally cause it to cry out, arch its back, and keep the head and neck rigid as though fearing to move. It even refrained from defaecating because, apparently, it disliked adopting the attitude essential and normal to that act.

Passive movements of the spine, or percussion of the spinous processes, caused, in some instances, symptoms of pain, but the position of the pain could not be localised. Occasionally the dog had seemed stiff in the limbs, tottery, and to dislike movement, but there had never been any paralysis. Five and a half months after the first attack there was another, followed a fortnight later by a third. The owner began to be worried about it and consulted one or two veterinary surgeons, one of whom suggested radiography with the result already indicated.

According to Hutyra and Marek, "intervertebral ossification develops as a result of osteoplastic periostitis in the neighbourhood of the intervertebral discs. The bodies vary in size and project into the vertebral canal, setting up a condition known as *enostosis intervertebralis* and causing compression of the cord."

charged under the scheme. Some doubt has been expressed as to the ability of the average practitioner to do all that is expected of him under this heading. Whether or not there is any ground for this complaint can only be answered by the practitioners themselves. A team of young men trained in infertility control has been appointed some time ago and has given a lot of tuition to practitioners, while to supplement that tuition a number of experienced practitioners have also helped. One of this team is now stationed at Ayr and I might explain the function of these men. This is threefold—tuition of practitioners, consultation and assistance with difficult cases and research work, but they are not expected to do the routine work for the practitioner. If you want tuition or assistance with a difficult case get in touch with Mr. Miller at the Hannah Institute and do not let it be said of any of you that you could not "deliver the goods." I know if I were in practice I would want these men's help and from attending a meeting of them the other day and hearing their discussion, I would feel confident that these men could help me, and if you give them a chance they can help you to open up successfully what is practically a new field of veterinary endeavour.

FIG. 1.—Calcified discs distinctly seen in the 3rd-4th and 4th-5th intervertebral spaces of the neck of a three-year-old Pekingese. There was torticollis but no paralysis.

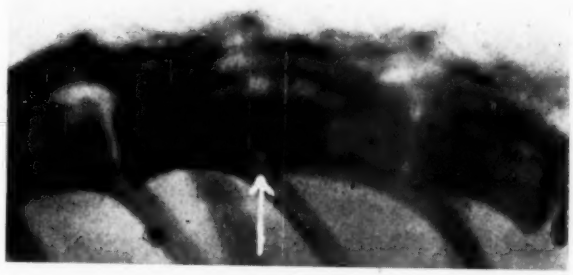

FIG. 2.—Opaque disc in the intervertebral space between 11th and 12th thoracic vertebrae of a four-year-old Peke. Paraplegia still slightly present after three months of treatment.

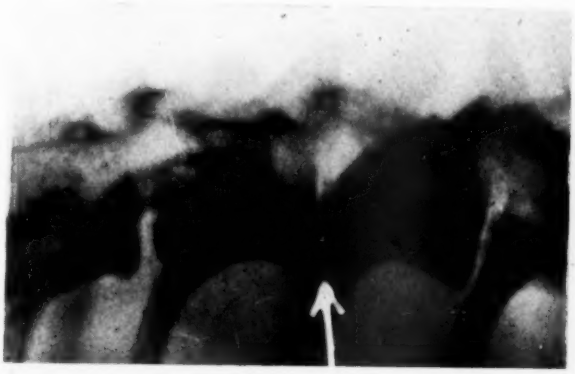

FIG. 3.—Calcified intervertebral disc between the 12th and 13th thoracic vertebrae of a Peke of unknown age. Recovery from paraplegia was complete after six weeks.

Diagnosis of such cases is only possible by X-ray, in spite of one opinion heard expressed at the Central meeting, that radiography in cases of paraplegia is a waste of time.

Paraplegia may arise from several conditions (*e.g.*, various degrees of dislocation or fracture, haemorrhage into the spinal canal, the condition under discussion, and others) and it is undoubtedly helpful, in forming a prognosis or line of treatment, to ascertain if possible which one is operating.

Gerry Schnelle, of Boston, recorded a case (*N. Amer. Vet.* **19**. Nos. 2 and 3) in which inflammation of the intervertebral discs with calcification caused intense pain in a cocker spaniel.

On July 1st of this year I radiographed a 4-year-old Peke which had suddenly lost the use of its hind legs, was averse to handling or movement, and exhibited unmistakable signs of anxiety in its demeanour. It would occasionally cry out without any apparent cause and still more when getting up, lying down, or making other movements. By the time I eventually saw the case, there was an appreciable muscular atrophy of the thigh muscles. The radiograph revealed calcification of the intervertebral disc between the 11th and 12th thoracic vertebrae. (Fig. 2.)

After three weeks of treatment I heard that the muscles had refilled and that the hind legs could be snatched away if touched. By the end of July he could occasionally stand for a few moments. At the end of September (time of writing) I understand there is still considerable paresis, but disappearance of other symptoms.

On August 11th a practitioner brought another Peke for radiography in consequence of similar symptoms. The film showed an opaque body between the 12th and 13th thoracic vertebrae. (Fig. 3.) On September 28th the veterinary surgeon wrote informing me that the dog had completely recovered, and added this paragraph:—

"It may be of interest to you to note that my brother tells me the condition occurs in human beings—generally women—causing acute backache, etc."

I have consulted many veterinary books and several medical works, but found no reference whatever in any veterinary literature to this condition (other than in Hutyra and Marek) and little indeed in the medical works.

Rhinehart in his "Roentgenographic Technique" says this: "Diseases of the bodies or other parts of the vertebrae are rare lesions. They are most often a tuberculous infection or metastasis from a distinct malignancy. Pain in the back, usually in the lumbar region, is a frequent symptom that calls for roentgenographic examination of the vertebral column."

Romanis and Mitchener in "Science and Practice of Surgery" portray a clinical picture under the heading of chronic spinal meningitis, which closely simulates the cases which have been observed in dogs. They say "this is usually a pachymeningitis which is very chronic and is accompanied by a certain amount of sclerosis of the surface of the cord. . . . There is considerable localised distension of the meninges with cerebro-spinal fluid, while the cord itself appears shrunken and thickened. The clinical features are those of an ill-defined local lesion of the cord and, therefore, may resemble a spinal tumour. The early symptoms are localised pain and weakness of muscles. This usually commences in one leg and spreads to the other, while there will be shooting pains and hyperaesthesia, which is not, however, very definitely localised to any particular roots. The weakness increases and becomes a definite spastic paralysis with rigid muscles . . . and the condition finally passes into a double spastic paraplegia."

Although the discs are not specifically mentioned, we have to conjecture whether the canine disease commences as a chronic spinal meningitis during the course of which the intervertebral discs become inflamed and calcified.

Holmes and Ruggles in their "Roentgen Interpretation" observe "The intervertebral discs being cartilaginous are, of course, transparent, but the spaces occupied by them are easily demonstrated. They may be absent in congenital anomalies, of which a common example is the fusion of the atlas and axis, or two or three adjacent bodies in any portion of the column. They may disappear as a result of infection, with bony union of adjacent bodies. . . . The discs are thinned in old age, also as a result of chronic arthritis, and in early stages of infection in their vicinity. Frequently the earliest evidence of a beginning tuberculosis is a narrowing of the adjoining intervertebral space. Thin plates of calcification are sometimes seen within discs but are without clinical significance."

That may or may not be true as concerns the human being, but the significant fact remains that in an appreciable number of radiographic examinations to ascertain the aetiology of paraplegia or vertebral pain in dogs, these calcified discs have been found.

In a very large number of radiographs of vertebral columns, associated or unassociated with symptoms, no disc lesions have been found; but *in no case have such lesions been found without the accompaniment of pain or paralysis.*

More than 50 per cent. of cases appear to recover and in none have I ever advised destruction. Thus, unfortunately I have not yet had an opportunity of following one of these animals to the *post-mortem* room.

If any reader ever can obtain the carcase of a dog so affected, I trust he will submit it to the very careful examination of a pathologist, in order that we may all enhance our knowledge of this malady, and particularly in the following respects:—

1. Is the primary cause an injury, a toxin or a specific disease?
2. Does the condition resolve and do the calcified bodies eventually disappear?
3. What is the condition of the cord itself?

CLINICAL COMMUNICATIONS

Re Use of Stilboestrol in Pyometra in the Bitch

I.—By

R. C. G. HANCOCK, B.Sc., M.R.C.V.S.
Beaconsfield

In regard to Mr. Watson's account of pyometra treated in the bitch by injections of stilboestrol, I undertook to treat a ten-year-old collie bitch with this drug recently.

She entered my infirmary on September 26th off feed, collapsed and ill, abdomen enormously distended, no vulval discharge. Five mgm. of stilboestrol was given intramuscularly. Within 24 hours there was considerable discharge on the kennel floor, and within 48 hours the abdomen appeared of normal dimensions, with the organs palpable. General condition improved and the bitch became active and fed well.

As the uterine horns still appeared very enlarged to the touch a week later, a second injection of 7 mgm. was given intramuscularly on October 3rd. Not much discharge resulted from this dose during the next 24 hours. 48 hours after this second injection the bitch was found dead quite unexpectedly.

Post-mortem examination revealed the uterus still full of pus in both horns (approximately one pint). No other cause of death was disclosed. Presumably death was due to the toxic effects of the pyometra to which the action of stilboestrol may have been a deciding factor in initiating a generalised infection. It remains for time to show whether this will prove a safe and permanent mode of treating this increasingly common complaint, once the requisite dosage and frequency of administration have been determined by further experience.

. . . . .

II.—By

R. J. SMITH LEASK, M.R.C.V.S.
Newton Abbot, Devon

I was very pleased to hear of Mr. Miller Watson's treatment of pyometra in the bitch. I tried it in August of this year, but was unsuccessful: at least the animal had a relapse and the owner had it destroyed before I returned from a few days' holiday.

On August 17th I visited a Welsh collie bitch and found her very depressed and the abdomen slightly enlarged. Diagnosing pyometra, I took her in for treatment, telling the owner she was too weak to operate: he said he would not have an operation in any case. As there was no discharge and the temperature was 105° F., I first put her on M & B 693, two tablets twice daily. A few days later she started to eat, but about a week from her entry she relapsed. Her abdomen became very distended, her temperature was subnormal, and her mucous membranes were very pallid; the inside of the lips of the vulva became a dirty pallid colour. Although she had become almost comatose, I decided to try stilboestrol dipropionate. I gave her 5 mgm. about 9 a.m. and when I came to see if she was dead next morning, I found she had voided a large amount of thick yellowish pus. Of course, she was being hand-fed. Next day she had improved beyond belief. She could walk and she ate of her own free will. For the next two or three days I douched the uterus twice daily with 1:10 000 solution of acriflavine. The improvement continued and I noticed no refilling of the uterus. I then let her go home, but later the owner told me that the womb started to fill very soon after, so he had her shot, as I was away and he did not like to wait. I would like to have had a second try, as the improvement was miraculous. I never saw a dog, so nearly dead, recover as this one did.

Pulmonary Pasteurellosis in Home-Reared Cattle

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ROYAL (DICK) VETERINARY COLLEGE

Subjects.—An eight-months Aberdeen Angus × Shorthorn cross heifer, and a four-year-old pure-bred Aberdeen Angus cow.

History.—Late on September 16th, 1942, a call was received to examine a heifer which had been found dead on a Pentland hill pasture 960 feet above sea-level. It had been last seen alive two days before, and there was a history of a cow on the same pasture having recently died and been buried. The following morning the carcase, which had some blood-stained mucous discharge at nostrils and anus, was found negative for anthrax, and accordingly a *post-mortem* examination was held. The findings were a toxic liver, and a heavy uniform congestion of the lungs and trachea, with traces of a diphtheritic membrane in the latter. The possibility of poisoning was considered, and the rumen contents searched for yew and bracken without result. Some traces of laurel, pine needles, and numerous oak, ash, and beech leaves were found.

The next day, September 18th, the heifer's mother was seen in the steading, to which the farm staff had conveyed her from the hill on the appearance of symptoms. There was severe respiratory distress, with sobbing grunts audible at a distance, a pronounced "lift" in the flank, and a blood-stained mucous discharge from the nostrils. The temperature was 106°, pulse 80, rather weak, and on auscultation and percussion the lungs appeared to be waterlogged. In the absence of specific serum, 10 c.c. mixed haemorrhagic septicaemia bacterin was administered. A blood film—A—was taken from the ear vein.

The cow died during the morning of the 19th, and was opened that afternoon. The findings were similar to those in the heifer, with more marked change in the lung and a well-defined diphtheritic membrane in the trachea. Portions of lung and heart-blood were taken with aseptic precautions and seeded into tubes of meat-piece broth; films of heart-blood—B, from lung surface—C, and tracheal lumen—D—were made on the spot.

The farmer was advised to bring the in-contact cattle off the hill, and improve their ration, since when no further cases have occurred.

Laboratory Diagnosis.—All four films were stained with Leishman's stain. Film A showed two possible bipolar organisms but was not convincingly diagnostic. Film B showed numerous well-defined rod-shaped organisms demonstrating clearly the typical bipolar staining of the *Pasteurella* group. These were also plainly seen in films C and D though the staining was less ideal. Film D contained in addition: staphylococci, round-ended rods in the act of producing distorting subterminal spores, very many lymphocytes, and a smaller number of neutrophiles. The broth culture was kept at room temperature for 48 hours, at the end of which there was distinct turbidity tending to settle towards the bottom. Subcultures were made on to four blood-agar plates, and these as well as the broth culture were incubated at 37° C. Circumstances delayed their examination till four days later, when the plates showed numerous compact pale grey colonies with an offensive smell. On one plate there were a few colonies of contaminants. A Leishman-stained film from a pure colony revealed pleomorphic involution forms of varying size, with little trace of bipolar staining. This is consistent with the usually described behaviour of *Pasteurella* in old cultures. The incubated broth showed dewdrop colonies covering the sides and bottom of the tube. Here pleomorphism was less marked and some bipolarity retained.

Comment.—Points of interest are: (1) that it was possible to make a definite diagnosis of pasteurellosis; (2) that both subjects were bred on the farm and had never undergone transit movements; (3) that the subjects' rumen contents included innutritious matter, and that the outbreak ceased when the in-contacts were housed and fed. This suggests the possibility that the cattle on this farm (like probably those on many others) are carriers of *Pasteurella boviseptica*, and that the clinical manifestations followed reduced vitality, consequent on the advancing season and poor feeding on high hill pasture.

Summary.—Two simultaneous deaths in home-bred cattle from high hill pasture, gave similar *post-mortem* findings, and one was shown to be due to a pulmonary type of pasteurellosis, with numerous organisms in the heart-blood, recoverable on culture.

* Final year student: this communication is made with acknowledgment to Mr. C. B. Davidson, M.R.C.V.S., Dalkeith, with whom the cases were seen.

A Commission for the control of sausages has been appointed in Danzig, states the German news agency. It consists of members of the Butchers' Association, the Police and the Veterinary Association.—*Reuter.*

ABSTRACTS

[**JOHNE'S DISEASE OF SHEEP.** EVELETH, D., GIFFORD, R., and ANTHONY, C. H. (1942.) *Vet. Med.* **37**. 241-247.]

Uncomplicated Johne's disease in sheep under field conditions is, in the authors' opinion, probably never encountered. They found the disease comparatively common in flocks with a high incidence of parasitic disease and the combination is regarded as one of considerable importance. The case history is in many instances similar; ewes just prior to, or just after, lambing develop severe diarrhoea, lose weight weaken and die. At autopsy there may be no lesions suggestive of Johne's disease, but acid-fast bacilli may be demonstrated in smears. Bureau of Animal Industry intradermal johnin was used as a diagnostic agent and is favourably regarded by the authors. They were able to demonstrate acid-fast organisms in 15 of 24 reacting animals and stress the difficulties in interpreting the test.

An interspecies transmission of the disease to cattle, horses, mules and swine was inferred from the results of the johnin tests and acid-fast bacilli were found in the intestinal mucosa of a number of reacting pigs, but not in the one mule examined. The authors are inclined to regard Johne's disease-infected swine as possibly dangerous carriers of the disease, but give no record of any cultural work to support this view.

A. W. T.

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[**SULPHAGUANIDINE IN SWINE ENTERITIS.** CAMERON, H. S. (1942.) *Cornell Vet.* **32**. 1-10.]

No attempt was made to ascertain the aetiology of the type of enteritis under consideration, though it appeared to be that form described elsewhere as "bloody dysentery," in which the faeces are very fluid and contain much blood in various stages of decomposition.

The dose of sulphaguanidine recommended is 1 gramme per 20 lb. body weight, this amount being the minimum for pigs of even less weight. For suckling pigs this dose is given on three successive days and experiments have shown that it can be given with safety at this rate to adult pigs four times a day for five days, a procedure which may be necessary to prevent a relapse.

The bacteriostatic action and low absorption rate make this drug a valuable therapeutic agent.

Details and tables of records are given of three herds where the above treatment met with an appreciable degree of success as judged by the results in general. There were, however, no adequate controls.

[Cases of "bloody dysentery" have been observed by the abstractor in this country, but despite investigation the aetiology remained obscure.] N. S. B.

* * * * *

[**BRUCELLOSIS IN A PREGNANT MARE.** STONE, W. S. (1941.) *Cornell Vet.* **31**. 394-396.]

A mare was affected for the last few weeks of a pregnancy period with an unopened fistulous withers lesion, but, although during this time her blood titre against *Brucella abortus* remained high (1:1600—1:800), and this organism was shown to be present in pure culture in the lesion, she gave birth to a normal foal at term, with a blood titre of 1:400, and *Brucella abortus* could not be demonstrated in the foetal membranes nor in the mare's milk.

E. C.

WEEKLY WISDOM

"*. . . My earliest recollections of the veterinary art are from boyhood's days. When visiting at a farmhouse one summer holiday I came across a wonderful veterinary book which informed me that when a horse was sent out to grass he must be blistered 'fore and aft,' as the sailors say, and when he was brought up again he must be given three courses of physic, the first to 'start up' the humours, the second to 'clear them out,' and the third 'to allay them.' I remember asking the farmer what 'humours' were, but his reply to my question was so 'painful and free' because I had dared to meddle with his books that my veterinary instincts were nipped in the bud, and my practical knowledge of the profession never extended beyond the humours of it. Hence, gentlemen, I must claim the privilege of a layman among the elect, and be allowed to deal with one or two matters of general interest rather than special professional details.*"—Professor Bottomley, Inaugural Address, Royal Veterinary College, London, 1902.

REPORT

[**New South Wales :** Livestock Diseases Report, 1940-1941.]

Mr. Max Henry, D.S.O., M.R.C.V.S., B.V.SC. (SYD.), Chief of the Division of Animal Industry, points out in his introduction to this short circular memorandum of the year's work conducted by his Department that the usual Stock Diseases Report could not be published in full but in order to ensure continuity of record this abbreviated edition was issued instead.

Military duties interfered considerably with the civilian work of the Department, nevertheless it would appear from the report that the staff available managed to cope extensively with routine field duties and, judging from the number of reports that were issued by the staff of the Research Institute and published in the *Australian Veterinary Journal* during the year, much progress was made with new problems as well.

The census of livestock in the State taken on March 31st, 1940, was : horses, 534,837 ; cattle, 2,762,653 ; pigs, 451,064, and sheep, 34,372,472. Amongst these the principal diseases referred to are : tuberculosis, brucellosis, contagious bovine pleuro-pneumonia, anthrax, blackleg, tick fever, enterotoxaemia and worm infestations.

A Tubercle-free Herd Scheme has been under way for some years but its progress has been slow. At the time of reporting, only 36 Government herds were listed in the scheme, and only eight of these were gazetted as also abortion-free. On account of a recent occurrence of brucella infection in swine a Brucellosis-free Herd (Swine) Scheme has also been established under which 2,766 pigs were blood tested during the year and 23 reactors discovered. Sixty-three outbreaks of bovine pleuro-pneumonia, involving 10,017 cattle, with 426 deaths, occurred during the year. There were 24 outbreaks of anthrax, the majority being in a recognised anthrax belt. Thirty-eight outbreaks of blackleg were reported and 52 outbreaks of tick fever.

In addition to dealing with these and other diseases the staff was engaged in supervising the dipping of practically all the animals in the State, a practice which has been in force for some years, with the object of destroying tick, lice and ked life which used to be and presumably still is a serious menace to animal health. The staff also deals with meat inspection and a list of the incidence of tuberculosis in slaughtered pigs in the different counties is given. The average rate of its incidence in the 634,108 pigs inspected was only 1·2 per cent. A further heavy duty on the field staff is the inspection of the millions of animals that pass into and leave the State each year. These movements are principally across the border to and from other States in the Australian Commonwealth ; only a small proportion are overseas shipments.

W. K.

VICTORY CHURN CONTEST

The Ministry of Agriculture's Victory Churn Contest is measuring the efforts of every county in England and Wales to maintain the milk supply. It is producing some surprising results in the six leagues that have been created for competitive purposes. The second series of tables to be published since the competition began in April have been compiled from the actual sales figures of the Milk Marketing Board and they relate to the month of September. They show that 37 of the 61 counties marketed more milk than in September, 1941. In June, 48 counties recorded increases.

Wales continues its remarkable lead with 11 of the 12 shires in the Principality's League recording such progress that they have doubled, trebled and even quadrupled the points scored in June. In heading the Welsh League, Pembrokeshire retains the lead for the country as a whole. Cumberland, at the head of the Northern League, has displaced the West Riding, Kesteven move to the top in the Eastern League, and in the Midland League Nottingham remains in the lead. Isle of Wight are strongly placed in comparison with other Southern League counties, but Dorset continues a close runner up to Cornwall for the honours in the Western League.

Lord Woolton, Minister of Food, and Mr. R. S. Hudson, Minister of Agriculture, have sent telegrams of congratulation to the War Agricultural Committees for the counties at the top of their respective leagues.

The current contest will close with the publication of tables based on milk sales in March, 1943. Interim tables will be compiled from statistics for December. A silver Victory Churn, the gift of an anonymous donor, will be held by the six championship counties at the close of this year's contest. Gold and silver certificates are also to be awarded for outstanding results achieved by individual farmers and their herdsmen.

Farm Livestock Emergency Service

DUTIES OF ANIMAL STEWARDS

It is necessary to complete the organisation throughout Great Britain of animal stewards, either by informing stewards already appointed under the Rural Areas Scheme of the National A.R.P. for Animals Committee of the formation of the new service and inviting their co-operation, or by appointing new stewards in areas not at present covered. The following note summarises the duties of animal stewards.

A.—Action to be taken immediately on appointment

1. Application should be made to the Chief Officer of Police for authority in writing to slaughter animals in the circumstances described in Regulation 79B of the Defence (General) Regulations 1939 as amended. (These applications might be handled, *en bloc*, by the County or Area Animal Steward.) A copy of the regulation is printed at the end of this note.

2. The detailed instructions in Appendix II on the slaughtering of animals should be carefully studied.

3. The animal steward should get to know personally all livestock owners within the area over which he operates. He should let them know the extent to which he is able to render assistance or advice if their animals are injured as a result of enemy action. (See Section B.)

4. He should, where possible, obtain the signatures of owners, on standard forms which will be supplied by the Service, to a statement that a member of the Service can proceed to deal with injured animals in the absence of the owner or his representative.

5. The animal stewards when talking to owners should emphasise at all times, the desirability from the national standpoint of effecting the maximum salvage, the benefit to the owner of securing the immediate salvage of seriously injured animals, and the prompt first-aid treatment of those less seriously injured. They should impress on farmers the importance of inspecting all stock quickly whenever an air raid has occurred in the vicinity. The need for reporting all casualties immediately and obtaining and submitting promptly claim forms to the proper authority when a loss of livestock is incurred should be impressed upon owners.

6. It will be necessary for a steward to make arrangements for carrying on his duties when he is away from home.

7. Local assistance should be recruited on a voluntary basis so as to be available if incidents occur. A butcher or other person capable of killing and dressing an animal should also be available to deal with small scale casualties.

8. The steward should know the location of all serviceable blocks and tackle in his neighbourhood.

9. The complete scheme of organisation within the Farm Livestock Emergency Service should be studied. This includes, in addition to the animal stewards' organisation, veterinary organisations under County Veterinary Officers, and salvage organisations under the Area Slaughterhouse Agents of the Ministry of Food. Stewards should bear in mind the advantages of using Civil Defence and Police channels of communication during an incident for summoning additional assistance including veterinary surgeons and salvage squads.

B.—After an Incident has Occurred

1. In the event of a raid in his parish or parishes the animal steward should ascertain the nature and extent of any damage to livestock and the assistance required.

2. He should get together his team of helpers and proceed to assist the farmer. Where outside assistance, either for veterinary or for salvage work, is required, he should summon it where it has not already been summoned.

3. On the arrival of a veterinary surgeon it is the duty of the animal steward and his assistants to carry out the veterinary surgeon's instructions. All possible assistance should also be rendered to the Ministry of Food's slaughtering gangs.

4. If the owner is present the steward's duty is to advise and help rather than to take charge.

5. As a general rule, if it is necessary to call for a veterinary surgeon no attempt at treatment should be undertaken by the steward. If, however, there are badly injured animals requiring immediate first-aid treatment or if it is obvious that they should be destroyed without awaiting the arrival of the slaughter squad he should take the necessary action in conjunction with the owner of the animals. Use should be made, where necessary, of the powers under Regulation 79B. (*See Appendix I.*)

6. Animal stewards should remember that carcases salvaged from animals injured as a result of enemy action must be examined by an Inspector of the Local Authority before they are passed for human consumption.

7. Animals affected by gas should not be handled except under the instructions of a veterinary surgeon, who should be summoned immediately in such cases.

8. As soon as possible after casualties have occurred in his area the steward should make a report on the form provided to the headquarters of the Service, through his County or Area Steward. He should keep a copy of this report. It is unnecessary for stewards to expend time, paper and postage making "Nil" returns.

9. If casualties occur in an area subject to restrictions on account of an outbreak of foot-and-mouth disease or other scheduled diseases, contact should immediately be made with the Divisional Veterinary Inspector of the Ministry of Agriculture and no action should be taken as regards the slaughter of animals or disposal of carcases without official consent.

10. In connection with claims for War Damage Compensation, animal stewards should advise owners that they should immediately get the necessary Board of Trade form, *viz.* P.C.S.3 or 4 from the Local Authority and return this form duly filled in within 30 days of the date of damage. It will provide useful evidence in support of a claim if a copy of the F.L.E.S. casualty report accompanies the Board of Trade form, and stock owners should be advised accordingly. The Livestock Officer of the Ministry of Agriculture and Fisheries may later visit the farm in order to discuss the claim with the owner.

11. The farmer should be advised of the possibility of subsequent effects, that may be related to the incident, such as abortion; and the desirability in such cases of calling in his veterinary practitioner and taking other advice how best any supplementary claim for War Damage Compensation should be returned.

12. In the event of invasion the stewards should carry on work of salvage on the above lines as long as possible; but on other matters they should conform to the instructions of the Regional Commissioner or other competent authority.

29, Tavistock Square,
London, W.C.1

APPENDIX I

Extract

DEFENCE REGULATIONS

VOLUME I

The Defence (General) Regulations, 1939

79B.—(1) In the event of the occurrence of hostile attack in the vicinity, any constable may—

(*a*) with a view to securing the public safety or maintaining public order, slaughter any animal which appears to him to be—
(i) at large or out of control; and
(ii) dangerous or seriously injured;

(*b*) with a view to preventing the wastage of food suitable for human consumption, slaughter any animal which appears to him to be seriously injured:

Provided that the power conferred by sub-paragraph (*b*) of this paragraph shall not be exercised, if the owner of the animal is present and objects.

(2) A chief officer of police, if he considers it necessary or expedient so to do for the purpose of—

(*a*) securing the public safety or maintaining public order; or

(*b*) preventing the wastage of food suitable for human consumption, in the event of hostile attack, may authorise in writing any person being a duly registered veterinary surgeon or an officer of an approved organisation to exercise the powers conferred on a constable by the foregoing paragraph.

(3) The power to slaughter an animal conferred by or under this Regulation shall include power—

(*a*) to cause or procure the animal to be slaughtered by some other person;

(*b*) to enter, and to authorise any such other person to enter, upon any land for the purpose of the slaughter; and

(*c*) to remove and dispose of the carcase, or cause it to be removed and disposed of:

Provided that—

(i) except where an animal is slaughtered in a place to which the public have access, the power to remove the carcase shall not be exercised if the owner is present and objects; and

(ii) any person exercising the power to dispose of a carcase shall comply with such directions (if any) as may be given to him by the chief officer of police.

(4) In this Regulation the expression "approved organisation" means any organisation formed for the promotion of the welfare of animals and for the time being approved for the purpose of this Regulation by the Minister of Home Security.

(5) This Regulation shall, in its application to Northern Ireland, have effect as if for the reference to the Minister of Home Security there were substituted a reference to the Secretary of State.

APPENDIX II

EMERGENCY SLAUGHTER

Attempt should be made to carry out salvage even if the animals are not in fat condition. Much meat of impaired quality is suitable for manufacturing purposes.

1. STUNNING.—No animals should be bled without first being rendered unconscious, preferably using a humane killer. If this is not available there can be no objection to the use of the poll-axe in the case of cattle, or the hammer in the case of pigs, provided that these are wielded by an experienced slaughterman.

2. BLEEDING—is important as on its efficiency depends the keeping quality of the carcase. After stunning or death in cattle, sheep and pigs, it is permissible for a maximum period of twenty minutes to elapse before these animals are bled.

(*a*) *Cattle* should have the neck severed by cutting with a sharp knife across the upper portion of the throat and carrying it down to the neck bones to ensure that the large vessels are cut. The animal should then be "possed". This process entails the looping of a length of rope round the upper foreleg: whilst pulling on this rope the operator should place his foot in the animal's flank and press vigorously in a forward direction (cf. artificial respiration). Continue for five minutes at the rate of 15 "posses" per minute. Should more than twenty minutes elapse before bleeding, the process of "possing" should be more vigorous and more prolonged.

(*b*) *Sheep and Pigs* should be bled by a similar transverse cut across the throat. Bleeding is greatly facilitated in these animals if, after being "stuck," they are hung head downwards to bleed. They need not be "posed."

3. EVISCERATION.—A speedy removal of the abdominal and thoracic organs is desirable.

In cattle

(*a*) Make an extensive cut through the abdominal wall extending from the breast bone to between the hind legs. Stomachs, liver, intestines, etc., should then be removed, care being taken to remove the rectum also.

(*b*) Cut through the diaphragm to allow air to circulate through the chest cavity.

In Sheep and Pigs

(*a*) Remove the stomachs, the whole of the bowel, the liver and other internal organs, otherwise decomposition develops rapidly in the hindquarters.

(*b*) Cut through the diaphragm and remove the heart and lungs.

IN THE CASE OF ALL FOOD ANIMALS, if bleeding and disembowelling is carried out within periods of 20 minutes and 60 minutes respectively of stunning, the carcases may safely be left without further attention for the following periods:—

Cattle: Five to six hours, or overnight in cool weather.

Sheep and Pigs: Twenty-four hours if hung up.

4. SKINNING.—CARCASES TRAVEL BETTER UNDER EMERGENCY CONDITIONS IF THE PELTS ARE NOT REMOVED. HIDES OF CATTLE AND SKINS OF SHEEP SHOULD GENERALLY BE LEFT ON, AND EVENTUALLY BE REMOVED BY SKILLED SLAUGHTERMEN. PIGS MAY BE SCALDED OR SKINNED AFTER THE CARCASES HAVE BEEN REMOVED TO A SLAUGHTERHOUSE.

5. DISPOSAL AND GRADING.—The carcase of emergency-slaughtered animals should be sent to the nearest Government slaughterhouse where the dressing will be completed and the carcase graded.

QUESTIONS IN PARLIAMENT

ARTIFICIAL INSEMINATION

Mr. GRANVILLE asked the Minister of Agriculture when he intends to introduce the promised legislation for the regulation of animal artificial insemination?

Mr. HUDSON: I hope to be in a position to introduce a Bill shortly.

* * * * *

HUNT ESTABLISHMENTS (FEEDING-STUFFS)

Mr. JOHN DUGDALE asked the Minister of Agriculture why it is considered necessary to allocate 47 tons of feeding-stuffs per month during the coming winter to hunt establishments?

Mr. HUDSON: Rations are allowed for a small number of horses and hounds in hunt establishments so that fox hunting on a small scale can be carried on.

Mr. DUGDALE: Is this done with a view to destroying foxes?

Mr. HUDSON: Yes, Sir, to destroy foxes.

Mr. DUGDALE: Is that the most economical form of doing it?

* * * * *

PIGS (RAW SWILL)

Mr. HIGGS asked the Minister of Agriculture the penalty for feeding raw swill to pigs; and how many people have been prosecuted for the offence this year?

Mr. HUDSON: Any person found guilty of feeding raw swill to pigs is liable to a fine not exceeding £50, or, if the offence is committed in respect of more than ten animals, to a fine not exceeding £5 for each animal. It is the duty of local authorities to undertake prosecutions for offences of this nature, and, accordingly, I am not in possession of a complete list of such proceedings. I have, however, been informed of 32 prosecutions this year involving fines totalling about £126, exclusive of costs.

Mr. HIGGS: Does the Minister consider that the fines imposed have been adequate to enforce this Order?

Mr. HUDSON: I am afraid that is not my responsibility.

Mr. SILVERMAN: Can the right hon. Gentleman say how much it costs the State to answer this Question in this way?

Mr. HUDSON: No, Sir, not without notice.

Mr. EVELYN WALKDEN: Is not the most likely punishment the sentence of death for the pigs?

The National Horse Association of Great Britain having been in constant contact with the Ministry of Agriculture regarding the interests of horse breeders and owners, the Executive Committee appreciated the desirability at the present juncture, of putting down infirm and very aged animals with no potential value for transport or work of any description. They feel, however, that it must be recognised that the restrictions on the use of petrol are rapidly increasing the demand for horses and ponies for transport purposes, and they would, therefore, deplore the destruction of any horse or pony capable of being ridden or driven, and which can be used for any sort of transport or having a potential value for breeding.—*N.H.A. News Sheet.*

NOTES AND NEWS

The Editor will be glad to receive items of professional interest for inclusion in these columns.

Diary of Events

Dec. 9th.—Meeting of the Society of Veterinary Practitioners at York, 2 p.m.

Jan. 5th and 6th, 1943.—First Annual Conference of the Veterinary Students' Association of Great Britain and Eire, at the Royal Veterinary College, Streatley, nr. Reading.

Jan. 16th, 1943.—Meeting of the Society of Women Veterinary Surgeons at Birmingham.

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Improvement of Farm Buildings

As announced in our last issue, the Minister of Agriculture and Fisheries has appointed a Committee to consider and make recommendations regarding the layout, design and construction of farm buildings.

The following letter received by the N.V.M.A. gives further information concerning this matter:—

MINISTRY OF AGRICULTURE AND FISHERIES

55, Whitehall,
London, S.W.1.
November 20th, 1942.

Dear Sir or Madam,

FARM BUILDINGS COMMITTEE

The Minister of Agriculture and Fisheries has recently appointed a Committee to consider and make recommendations regarding the layout, design and construction of farm buildings after the war.

Many new requirements have to be met and much experience has been gained during recent years. The Committee will have under review both permanent and temporary buildings, new and existing, and will consider such questions as durability combined with adaptability to changing requirements, practical use combined with good design in every sense of the word, labour saving, lighting, ventilation, health both of worker and stock, access, convenience and so on, bearing in mind both the minimum essentials and also desirable additions.

In particular the Committee propose to consider the following main types of buildings: (i) Stables and loose boxes, (ii) Cow sheds and cattle yards, (iii) Dairies, (iv) Barns and storage sheds, (v) Buildings for storage of machinery and implements, (vi) Piggeries, (vii) Poultry houses, (viii) Silos and (ix) Workshops. Farmhouses and cottages do not come within the terms of reference.

Each of these buildings will be considered separately in the first instance, and it will probably be necessary to produce alternative designs for (i) different sizes of farms, (ii) climatic conditions of different parts of the country, (iii) different types of farming and (iv) materials likely to be available in the immediate post-war years, and in later years. Finally the general layout will be considered.

In the light of this information I have been asked by the Chairman on behalf of the Committee to enquire whether your Association would wish to submit any written evidence or suggestions for the consideration of the Committee, and to add that it would be of great assistance to the Committee if any such evidence could be prepared having regard to the proposed procedure of the Committee outlined above.

The Minister is anxious to receive the Committee's report at the earliest opportunity and it is hoped that your Association will find it possible to submit any views they wish to express as soon as possible and in any event not later than January 25th next.

Yours faithfully,
(Signed) L. Miall,
Administrative Secretary.

The Secretary,
National Veterinary Medical Association,
36, Gordon Square, W.C.1.

Having accepted the invitation contained in the above letter, the Association is anxious that its evidence shall be based on as wide an expression of views as possible, and accordingly members are invited to submit written comment and any information they are in a position to provide on the matters referred to. If members can quote experimental evidence or results of recorded experience, this would be a great advantage.

It is felt that the Association's evidence should be restricted to the buildings numbered:—

(i) Stables and loose boxes;
(ii) Cowsheds and cattle yards;
(iii) Dairies;
(vi) Piggeries:
(vii) Poultry houses.

Although the housing of calves is not specifically mentioned it is proposed to consider this important item as coming under (ii).

As the matter is of some urgency, it is requested that members who intend to respond to this invitation will forward their views so as to reach the General Secretary, N.V.M.A., 36, Gordon Square, W.C.1, not later than December 21st.

The Late Capt. James Roland Rider, M.R.C.V.S.

An Appreciation

After a long illness born with heroic fortitude, James Roland Rider died peacefully at his residence in Darlington on November 19th, 1942. At this time, when so many know the sorrow and tribulation of a nation at war, at this time, as at all times, it is fitting to honour our glorious dead, to record the triumph of man, that their example may shine as a beacon in the wilderness and as a torch to him who would see. Jim Rider, at the height of his powers, has been taken from us, but the memory of his intellect, his enthusiasm, his leadership and above all his great humanity, will remain a cherished possession of his many friends and admirers. Possessed of considerable intellectual gifts and marked organising ability, he had a quiet, sympathetic and Christian nature which made him the confidante of many and the friend of all.

Jerome

The elder son of our devoted friends, Mr. and Mrs. J. W. Rider, Jim was born at Beamish, Co. Durham in 1894, and after schooling at St. Bees, proceeded to the Royal (Dick) Veterinary College, resolved to carve out a career in the same profession as his father. His veterinary studies were interrupted by the first phase of the World War (1914-1918) and with many more young Rider enlisted, and was soon commissioned in the Regiment of Scottish Horse, where he ultimately commanded a Company and reached the rank of Captain. Owing to the shortage of veterinary surgeons Rider returned to Edinburgh, and after a brilliant scholastic career qualified in 1918 and was again commissioned, this time in the Royal Army Veterinary Corps. Next followed a short term of army service at home and in the Near East, and on being demobilised he married Miss Anna Ness, his devoted wife and helpmate. After a spell of general practice he finally secured the appointment of veterinarian to Messrs. Pease & Partners, coal and ironmasters, and on his father's retirement in 1938 he became veterinarian to the Lambton, Hetton and Joicey Collieries. He had now several thousands of horses and ponies under his care, and the thorough manner in which he reorganised and systematised this work during the 22 years he held the appointment is in itself a tribute to Rider and a signal proof of his logical and keen mind. During the last twelve years he also built up a considerable general practice in the environs of Darlington, and as he was throughout deeply concerned in the councils of his profession, Jim Rider's working day was commonly a long one. Indeed, he burned the midnight oil in the service of his colleagues, and it seems highly probable that at this

period he overtaxed a none too robust physique and paved the way for subsequent infection.

His achievements as Secretary of the North of England Division are well known. His twelve years of devoted service doubtless coincided with a remarkable and general resurgence of organised professional activity, for men everywhere felt that a new era had dawned in which veterinary science must be construed on a broader basis. Jim Rider was very conscious of this movement which he fostered and led, not thrustingly, but wisely and patiently, by example and precept, and under his guidance the Division prospered as never before. In 1928 a successful National Congress was held at Newcastle-on-Tyne, under the Presidency of Mr. J. W. McIntosh, and Jim Rider stood out as the perfect local Secretary. From all sides he was congratulated on the excellence of the arrangements made, and the writer, who was a member of the executive committee, can testify to the enormous amount of detailed work which he accomplished. In 1933 the National Association called him to become its Secretary and this commenced a period of concentrated activity. Rider was deeply involved in all the controversies and problems of the day, such as our relationship with the animal welfare societies free tuberculin testing, consultative committees, etc., and though he seldom spoke in public he proved a wise and patient councillor and a skilful negotiator who laboured unceasingly behind the scenes. When using tuberculin about this time, Rider had the misfortune to prick his thumb with the hypodermic needle, and this accident may have been fraught with serious consequences for his health. It is quite possible that this injection produced a specific systemic response, notwithstanding the fact that no local reaction appeared.

Rider's mind was keen and analytical and his contributions to veterinary science evince the same painstaking care which characterised everything he did. His work on diverticulitis in pit ponies was strikingly original and thoroughly done and he even found time to process and cut sections through diverticula. He was most successful in making apparatus and among many pieces he constructed was a colorimeter, which he used to estimate the percentage haemoglobin in the blood of horses. As a general practitioner he was much interested in tuberculosis and in tuberculin testing, and in May, 1941, he published a note on the interpretation of the test, and showed that skin measurements can be read repeatedly with an error of less than 0·5 mm. It is no hyperbole to say that Rider gave his life for his profession and his professional interest was maintained till the very end.

He was laid to rest on Saturday, November 21st, in the beautiful West Cemetery of Darlington, in the presence of many members of the veterinary profession. Capt. C. Nicholson and Capt. W. Lyle Stewart reprtsented the National Veterinary Medical Association and the North of England Division and other members of the profession included Major W. Halstead, Mr. W. P. Lightfoot, Mr. R. W. Bowman, Mr. G. M. G. Oliver, Mr. C. G. Hill, Mr. W. Storrar and Jim's father, Mr. J. W. Rider. Many members and friends were prevented from attending by the prevailing difficulties of travel. Rider is survived by his widow and two sons and a daughter, and by his father and mother, for whom deep sympathy is felt. Joan Rider is at present in Bermuda, employed in the Imperial Censorship Department, and was consequently unable to be present. Striking tribute to Jim's many great qualities was paid at the funeral service, which was conducted by the Rev. L. H. Robinson, of the Presbyterian Church, Darlington.

Thus we honour the memory of a life spent in the alleviation of animal suffering. Rider's sterling character and high moral purpose will long remain an inspiration to his colleagues and friends.

W. L. S.

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PERSONAL

Appointment.—The department of State for Scotland has confirmed the appointment of H. E. Harbour, B.A., M.R.C.V.S., as Veterinary Investigation Officer to the Edinburgh and East of Scotland Agricultural College. For the past 3½ years Mr. Harbour held the post of Assistant V.I.O. at the University College of North Wales, Bangor, and for the last twelve months was the very popular and energetic Hon. Secretary of the North Wales Division of the N.V.M.A. During his stay in North Wales he made many friends, all of whom and others will read of his new appointment with much pleasure, although their congratulation will no doubt be tinged with a feeling of regret at his departure from the Principality.

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Birth.—Milligan.—At Longton Cottage Hospital on November 29th, 1942, to Mary, wife of J. B. Milligan, M.R.C.V.S., 57, Trentham Road, Longton—a daughter.

HEALTH MINISTRY'S MEDICAL ADVISORY COMMITTEE

Miss Horsbrugh, Parliamentary Secretary to the Ministry of Health, stated in the House of Commons on Thursday last, in reply to a question by Sir Francis Fremantle regarding the planning of the future of health services, that a Medical Advisory Committee had been set up to advise the Minister on the medical aspects of problems relating to the health of the people.

The Minister, she said, had for some time felt the need for associating with the work of the Ministry of Health a representative body of medical men and women engaged mainly in the clinical practice of their profession.

The members of the Committee are:—

The Presidents of the Royal College of Physicians, the Royal College of Surgeons, and the Royal College of Obstetricians and Gynaecologists; the Chairman of Council of the British Medical Association; Dr. G. C. Anderson; Dr. J. C. Arthur; Miss A. Bloomfield, M.D.; Dr. J. A. Brown; Dr. E. Rock Carling; Dr. J. A. Charles; Professor H. Cohen; Dr. W. Allen Daley; Lord Dawson of Penn; Dr. E. A. Gregg; Lord Horder; Sir William Jameson (Vice-Chairman); Dr. W. S. Macdonald; Dr. A. A. Moncrieff; Professor R. M. F. Picken; Professor H. Platt; Dr. A. T. Rogers; Dr. D. O. Twining; Dr. O. Williams; and Miss A. L. Winner, M.D. (Lt.-Col.).

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GLASGOW VETERINARY COLLEGE

Presentations at Prize-giving Ceremony

At the annual prize-giving of the Glasgow Veterinary College on November 19th, at which Mr. Alexander Murdoch, Chairman of the Board of Governors, presided, Dr. A. W. Whitehouse, the Principal, was presented with gifts from the Governors and students of the College to mark the high honour which has been conferred upon him by his appointment as President of the Royal College of Veterinary Surgeons. The Chairman and also the Lord Provost, Mr. John M. Biggar, who distributed the prizes, congratulated Dr. Whitehouse on his appointment.

A presentation to Mr. William Betts Donaldson, one of the Governors, was also made at the prize-giving ceremony. Mr. Donaldson, it was explained, had defrayed the cost of publishing a history of the College, written by Mr. William Adair, agricultural editor of *The Glasgow Herald*, and in recognition of his generosity and his deep interest in the welfare of the College he was presented with a specially bound copy of the history.

The gold medal for the best aggregate in the professional examinations during the five years' course was won by J. B. Bayliss. The silver medallists were: Fifth year—A. Miller, in medicine; I. C. Bryson, in surgery. Fourth year—Miss M. B. Cooper, in pathology; W. Stewart, in parasitology. Third year—T. C. Denholm, in senior anatomy; Hartman Smith, C.A., in pharmacology and hygiene. Animal management—Miss J. Mackenzie. Second year—Miss J. M. Wilson, in physiology; Miss M. Mackenzie, in histology; A. Mackenzie, in junior anatomy. First year—G. Young, in chemistry; A. T. Dickie, in biology.

T. C. Denholm was awarded the special prize given by Dr. Whitehouse for the best aggregate in anatomy (junior and senior and professional). Miss J. Mackenzie was awarded the special prize given by Mrs. Marshall for the best aggregate among the girls for animal management (first and second years).

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"THE BATTLE OF THE LAND"

Earl De La Warr, the Minister of Agriculture's Liaison Officer for Kent, Surrey and East and West Sussex, in a recent address to the Overseas League, said that before the war the world as a whole thought nothing of British farming. Even our own people did not realise that agriculture was still our largest industry and that up to 1932 it had remained so without assistance in the form either of tariff or subsidy. Later, when it needed help from the State it was up against conditions that brought ruin to farmers all over the world. That was at a time when our steel industry had up to 100 per cent. protection and when Great Britain had over three million unemployed and U.S.A. eleven million.

At the outbreak of war this country had 2 to 3 million tons less of merchant shipping than in 1914 and 3 to 4 million acres of land had been lost to roads, buildings, aerodromes, etc. There were 300,000 fewer agricultural labourers and a larger population to feed. Navies of other nations that were with us in the last war were against us in this. These were the difficulties and the explanation why we had to ask for so great an effort from our farmers.

In the south-eastern region there had been other difficulties. In one county alone in six months some 70,000 bombs had landed on the farms, not to mention a considerable number of German aeroplanes. Steel helmets had had to be borrowed for use by land girls, some of whom had been machine-gunned on their tractors near the coast. Great military engines had trampled down corn

and dug out trenches. Thousands of acres of the best land had been taken for aerodromes.

No figures, Lord De La Warr said, could measure the farmers' response or the way in which they had met and overcome these great difficulties, but he could say that the tons of shipping saved through their efforts could be counted by the million, and that the increase of food production was between four and five times the original estimates of the best expert advisers of the Government. In England and Wales alone 4½ million acres of ploughland had been added to the pre-war nine million.

That was the work of tens of thousands of farmers, each determined to do his best. It was true that every farm in the country had been surveyed or inspected, but the inspections had been carried out by fellow-farmers who came as friends and advisers. All over the country there was a voluntary army of 7,000 or so of the better farmers working on behalf of the County War Agricultural Executive Committees, giving freely of their time with no other reward than the knowledge that they were making their contribution to the war effort.

Agriculture—often described as the most backward and most conservative of industries—had provided a form of self-regulation far more drastic than the control asserted over any other industry. Not only had it been accepted but there was an almost universal desire to see it continued with suitable peace-time adjustments after the war. These men and this industry had proved themselves to be a vitally important and morally valuable part of our war effort. Were they once again to be let down and the soil of our country allowed to go back to ruin and neglect?

"I say to you who come from overseas," said Lord De La Warr, "that this is your problem as well as ours. . . . The same conditions that defeated us defeated you. We have to plan in future, not for you and not for this country, but for us all." In the past we had cut one another's throats. It was true that the towns had had cheap food, but in getting it they had destroyed their own markets—the raw material producers—over 80 per cent. of the population of the world.

The towns must have cheap food, not because the chaos of the food market enabled them to buy at knock-out prices, but because production and marketing were so organised that plenty could reach customers with the minimum of waste. We failed before the war because we misconceived the problem. Not over-production but under-consumption was our problem. Then, millions were existing below a standard that permitted the barest health. Lord De La Warr concluded:—

"The market is there—it is embraced in the great phrase of the Atlantic Charter—freedom from want. The Battle of the Land has been one of the great victories of the war. If we carry it on into the days of peace, it can, I believe, be one of the great victories in the battle to rebuild the health of our people on the soundest of all foundations—the prosperity of our land and of those who live by it."

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MINISTRY OF AGRICULTURE NEWS SERVICE

Farmers' Part in New Offensive

Allied landings in North Africa have given substantial proof of the way in which the nation has responded to the call—"save shipping." Farmers, in particular, must feel proud of the part they have played in this great achievement. This country now produces 63 per cent. by weight of its own food compared with 30 per cent. before the war. The shipping necessary to carry this 33 per cent. increase has thus been saved.

We have 48,000,000 people to feed: their health and efficiency is our mainstay. Three million dairy cattle must also be maintained to give a maximum yield of milk on a minimum quantity of imported food. Ships in increasing numbers will be required to carry men and supplies wherever and whenever they are needed: in fact shipping space is now more vital than at any time during the past three years. No undertaking, however trivial it may appear, must be left undone if it will save shipping space. In merchantmen space is reckoned in cubic feet and one ton of shipped merchandise, irrespective of its nature, occupies 40 cubic feet. Replace the tons by acres of home-grown food.

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Planning for the War's Fourth Harvest.—The call has gone out for more winter milk, more wheat and more cattle on the land. All three are within the range of county planning and individual effort. No plot of land, however small, should lie idle; the milking strength of every herd should be concentrated in the months when milk is needed most. Production on every farm must not fall below the maximum capacity of its land.

Achievements to date are considerable, but there is still a margin for that crowning effort to throw the full weight of Britain's resources into our bid for victory. No farm must be allowed to lag behind for the want of implements that could be loaned by a neighbour; sound advice from one farmer to another must be neither resented nor withheld. Agriculture's effort must be so spontaneous and dynamic that it will serve as an example to the whole nation. It must do more than operate under Government orders and county administration; those factors are merely a guiding hand in what the individual farmer sets out to achieve for his country—an adequate food supply and fewer ships to maintain it.

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More Herds "on the Panel."—Farmers with herds under the veterinary "panel scheme" now (November 2nd, 1942) total 3,549 and 145,973 cattle are subject to regular veterinary inspection. The regular examination of dairy herds is one of the surest means of lowering the loss in milk sustained by owners and the nation. The scheme is a voluntary one and special fees for herds placed "on the panel" have been agreed between the National Veterinary Medical Association and the National Farmers' Union.

The Council of Agriculture for Wales has emphasised to Welsh farmers the benefits obtained by placing their cattle on the scheme. Already 454 farmers have put their herds "on the panel" and nearly 16,000 cattle in Wales are receiving regular attention by veterinary surgeons (at nominal fees) for the control of mastitis, abortion, sterility and Johne's disease.

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Autumn Sowings.—In all cropping plans protein-rich food must be included. Beans, peas and oat mixtures, kale, silage and early cut hay are crops to bear in mind. Farmers contemplating silage—and this means every farmer—from young grass should remember that the yield of grass for ensiling depends greatly on rainfall. It is, therefore, wise to grow an additional protein crop, such as kale, that, once established, can resist summer drought and bulk up with the autumn rains.

The advantage taken to plough whenever possible at the fall of the year will determine the area of arable land that can be managed successfully. Late ploughing means late sowings, poor crops, late harvests and in addition, heavier worries and lighter money bags.

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Pit Silage

Mr. Clyde Higgs, of Stratford-on-Avon, advocates making grass silage in a pit. With a digger behind a Fordson tractor, a hole 15 yards long, 5 yards wide and one deep, is dug, the excavated earth being put on both sides.

Such a pit holds about 100 tons. Loads of fresh grass are spread evenly over the pit. Each load is drawn over the grass already in place and in addition the mass is rolled by a tractor. Molasses, about 15 lb. to a ton (diluted with water), is poured on. The heap, when 5 ft. high, is shaped by cutting off the sloping ends and covered by about a foot of earth.

Care is needed in choosing the pit site and a drain is necessary on heavy land. An interesting side-line is the growing of cucumbers, marrows and pumpkins in the soil on top of the pits.

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Uncovered Silos Cause Big Wastage of Cattle Food.—Farmers who would not dream of leaving their haystacks unthatched sometimes leave their silos without any protection from rain. The result is an enormous wastage of good milk-producing food. Cases have occurred where half the silage has been lost through this cause alone; on a 15 ft. diameter silo that means the destruction of a winter's milk production ration for five average cows or the produce of five acres of pastureland.

If the top of the silage has been kept dome-shaped and the over-silo removed when settling complete, a good air seal will help to shoot off any rain water, but it is no adequate protection. A tarpaulin may be thrown on top, but in war-time a rough thatch is an ideal means of replacing materials that are scarce.

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War-time Concentrates

Balancing of Protein and Cereals.—Some dairy farmers are not making the best use of their coupons for feeding-stuffs. Coupons enable the farmer to buy concentrates to supplement home-grown food; as protein is usually more lacking than starch (which can be provided from home-grown oats) the producer as a rule gets more protein than cereal coupons.

If he receives only protein coupons he can balance his home-grown cereals by buying either straight cake or a licensed concentrate which is obtainable with protein coupons and is suitable for feeding with cereals. If he has roughly equal proportions of protein and cereal coupons he can buy a grain balancer which can be fed with its own weight of home-grown cereals; or, if he prefers,

he can buy straight foods and make up his own balanced ration with these and oats from his own farm.

The farmer who wishes to feed all compounds must get his coupons in the proportion of 1 protein to 2 cereal. This he can get throughout the season if he has sold oats to the extent of 3 cwt. per cow. He can then buy National Cattle Food No. 1A, which is properly balanced for milk production and requires no supplementary grain. In fact, to attempt to improve National Cattle Food No. 1A by adding cereals merely unbalances the ration and results in a deficiency of protein.

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Milk producers should acquaint themselves with all there is to know about this year's rationing scheme—what foods are available, what is their feeding value for milk production, and how to use them to supplement feeding-stuffs grown on the farm. Information can be had from the County War Agricultural Committees.

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Find out the milk producing values of all home-grown food and how much bulk it is safe to feed.

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Pay attention to each cow's individual requirements.

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Now is the time to plan a cropping policy to attain self-sufficiency for 1943-44 and for adjusting calving dates for winter milk.

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At a meeting of the Council of the Clydesdale Horse Society, with Professor John McCall, M.R.C.V.S. (President) in the chair, a letter was read from the Department of Agriculture for Scotland, intimating that the Scheme for the Encouragement of Heavy Horse Breeding which had been put into operation this year would again be administered on similar lines in 1943.

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Major Aston writes: "An R.A.V.C. Detachment, stationed in the North, is being trained during the winter in snow warfare. Skis on loan or as a gift would be very greatly appreciated and in the first instance can be sent to care of the Commanding Officer addressed to Major W. F. Aston, Murivance, Shrewsbury."

CORRESPONDENCE

Letters to the Editor should reach the Office not later than by the first post on Monday morning for insertion in following Saturday's issue.

The views expressed in letters addressed to the Editor represent the personal view of the writer only and must not be taken as expressing the opinion or having received the approval of the N.V.M.A.

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INFERTILITY IN CATTLE

Sir,—I read with interest Mr. J. Edwards's letter on the subject of bovine sterility of physiological origin in the current issue of *The Veterinary Record*. Mr. Edwards suggests "that cows which remain anoestrous after calving are doing their best to obtain a period of recuperation after their labours." With this suggestion all who have interested themselves in bovine reproductive physiology and pathology must be in agreement. Under ideal conditions of peace and plenty we should probably all agree also that the attempt "to force such animals into calf by injecting hormones" should not be practised as it is likely, in the long run, to be detrimental to the health of the dairy stocks of the country. However, we are living at present under exceptional circumstances when every gallon of milk produced is important. We cannot feed our animals as well as we would, but we can, by the intelligent use of hormones, counteract the *immediate* ill effects of poor rationing to a certain degree at least. Surely, in these days, we must compromise and help the cattle population to make that extra effort at present demanded of their masters!

The phenomenon of absence of "heat" for some months after calving is an interesting one. A study of it has led me to classify cases as follows:—

(1) Animals in which the ovaries are apparently non-functioning. Such cases present true post-partum anoestrum and are likely to respond to the administration of pregnant mare serum.

(2) Animals which undergo an apparently normal ovarian cycle. Follicles mature, ovulation occurs, and corpora lutea wax and wane, but no marked signs of oestrum accompany the presence of ripe follicles in the ovary. These animals represent cases of post-partum sub-oestrum and usually respond to enucleation of the corpus luteum or to the administration of an oestrogen.

In order to differentiate clearly between these two conditions it will be appreciated that at least two examinations at intervals of preferably from seven to ten days are often essential. Such preliminary examinations are *not* a waste of time for the busy practitioner. In fact, if he is to treat his case intelligently, they are a necessary preliminary.

It is possible that a third type of case may exist, *viz.*, the animal suffering from the condition "corpus luteum persistens." It has not, however, been my good fortune to observe any case of persistent corpus luteum uncomplicated by the existence of pyometra.

How may post-partum anoestrum be accounted for? It is believed that cattle under natural conditions have, like most other animals, a definite breeding season, their calves being born in spring and early summer[1]. This means that the females probably do not come on heat for about the first three months after calving and that their ovaries become, during this period, quiescent—as do those of most animals which experience a definite anoestrum. The more sheltered conditions under which dairy cattle live, usually entailing richer feeding and protection from the weather, encourage the reproductive system to dispense with this period of recuperative anoestrum to a greater or less extent. Thus, most cows come on heat within the first few weeks after calving and continue to do so every 18 to 23 days until pregnancy supervenes. If, however, the improved conditions are not sufficient to offset the demands imposed on the anterior pituitary by lactation the gland may be unable to elaborate sufficient follicle stimulating hormone to initiate the oestral cycle and a return to the primitive condition occurs. A case of post-partum anoestrum is the result.

How may the sub-oestrous case be explained? It is possible that the amount of folliculin required to cause visible signs of oestrum is dependent to some extent on the degree of "strain" imposed on the animal's body by various factors such as adverse weather conditions and heavy lactation. In other words, the "dose" of folliculin which will cause a cow to come on heat, provided she is giving only a moderate milk yield and is subjected to favourable climatic conditions, may not be sufficient to cause similar symptoms in an animal exposed to the less favourable conditions of heavy lactation and bad weather.

I should be interested to have the opinions of other veterinarians on these matters and particularly to hear from anyone who has observed and definitely established a case of corpus luteum persistens uncomplicated by pyometra.

Yours faithfully,

Calvington Farm House, J. G. Murray.
nr. Newport,
Salop.
November 24th, 1942.

[1] Hammond. Reproduction in the Cow. Cambridge University Press, 1927.

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THE VETERINARY EDUCATIONAL TRUST

Sir,—At the Mansion House luncheon our President sprang a pleasant surprise upon many of us by his announcement that a "Veterinary Educational Trust" had been established, and it would now appear from your issue of November 7th that the "first meeting of the Trustees and Council of the Trust, which aims at raising £1,000,000 to improve veterinary education facilities," has already been held and "plans for future action approved."

If it is not impertinence for a mere member of the profession to enquire, how is it proposed to raise this large sum? May I suggest that if it is to be provided by the distinguished gentlemen of the Council from some secret source, "well and good"; but if the public is to be asked to subscribe any large part of it, I fear the scheme is foredoomed to failure. As one who was closely associated with the late Sir Frederick Hobday during the latter days of his life, I frequently heard him describe the difficulties he experienced and the indignities he had to suffer during his self-sacrificing efforts to raise the money for his Royal Veterinary College scheme. "Once bitten twice shy" is an old saying, and in view of the result of its previous generosity I doubt whether the British public will respond to a second appeal with any degree of enthusiasm; moreover, remembering the treatment meted out to Sir Frederick, I doubt whether many members of the profession will readily reassume the role of mendicants.

In any case Veterinary Science is essential to the future welfare of the Agricultural Industry—the premier industry of this country; and the fostering of that industry is the obligation of the State. In other words, perhaps too plain to be polite, if the State requires Veterinary Science—which includes Veterinary Education, Research and General Practice—it should pay for it.

Yours faithfully,

Alton, Ll. E. W. Bevan.
Hants.
November 23rd, 1942.